

III. CLAIM AMENDMENTS

1. (Currently Amended) A method for transferring image information from a camera module to an electronic device, the camera module being integrated in the electronic device, the method comprising the steps of:

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~~in which~~forming an image ~~is formed~~ in the camera module by means of an image sensor comprising pixels which convert light to which the pixels are exposed into an ~~anlaogue~~ analogue signal, ~~which is~~

converteding said analogue signal into digital image information by analogue-to-digital conversion, and the

transferring the digital image information ~~is transferred from the camera module to the electronic device under control of the electronic device, characterised via an internal serial connection bus of the electronic device.~~ ~~in that the camera module is adapted to operate in either one of a normal photographic mode and a viewfinder mode, wherein when operating in viewfinder mode the camera module reduces the quantity of digital image information to be transferred from the camera module to the electronic device compared with the quantity of digital image information that is transferred when the camera operates in normal photographic mode.~~

2. (Cancelled)

3. (Currently Amended) A method according to ~~elaim 1~~claim 45, ~~characterised in that~~wherein reduction of the quantity of

digital image information to be transferred from the camera module is conducted by adjusting the conversion accuracy of the analogue--to--digital conversion.

4. (Currently Amended) A method according to ~~claim 1~~claim 45, ~~characterised in that~~wherein reduction of the quantity of information to be transferred from the camera module is conducted by reducing the resolution of the image.

5. (Currently Amended) A method according to claim 4, ~~characterised in that~~wherein reduction of the resolution of the image is conducted by under-sampling the digital image information.

6. (Currently Amended) A method according to claim 4, ~~characterised in that~~wherein the resolution of the image is restored in the electronic device by interpolation from the received digital image information.

7. (Currently Amended) A camera module to be used as an integrated camera module for an electronic device, the camera module comprising an image sensor with pixels for conducting photoelectric conversion, and means an analogue-to-digital converter for conversion of an analogue signal generated by said pixels into digital image information, the camera module further comprising:

~~means for~~ a serial connection circuit for transferring digital image information to an the electronic device under and for receiving control information e from the electronic device via an internal serial connection bus

of the electronic device, ~~characterised in that the camera module is adapted to operate in either one of a normal photographic mode and a viewfinder mode, and comprises means for reducing the quantity of digital image information to be transferred from the camera module to the electronic device when operating in viewfinder mode compared with the quantity of digital image information that is transferred when the camera operates in normal photographic mode.~~

8. (Cancelled)

9. (Currently Amended) A camera module according to ~~claim~~ claim 47, ~~characterised in that adapted to said means for~~ reducing the quantity of digital image information to be transferred from the camera module ~~comprises means for~~ by adjusting the conversion accuracy of the analogue-to-digital conversion performed by the analogue-to-digital converter.

10. (Currently Amended) A camera module according to ~~claim~~ claim 47, ~~characterised in that adapted to said means for~~ reducing the quantity of digital image information to be transferred from the camera module ~~comprises means for~~ by reducing the resolution of the image.

11. (Currently Amended) A camera module according to claim 10, ~~characterised in that adapted to said means for~~ reducing the resolution of the image ~~comprises means for~~ by under-sampling the digital image information.

12. (Cancelled)

13. (Currently amended) A mobile station, comprising-


~~means for connecting to~~ a camera module, the camera module comprising an image sensor with pixels for conducting a photoelectric conversion, ~~and means~~ an analogue-to-digital converter for converting an analogue signal generated by the image sensor into digital image information, and

~~means for controlling the~~ a serial connection circuit for transferring of digital image information formed by the camera module to the mobile station,

~~characterised in that the mobile station further comprises~~ an internal serial connection bus for transferring digital image information from the camera module to the mobile station and for transferring control information from the mobile station to the camera module ~~means for setting the camera module to operate in either one of a normal photographic mode and a viewfinder mode, wherein when operating in viewfinder mode the camera module reduces the quantity of digital image information to be transferred from the camera module to the electronic device compared with the quantity of digital image information that is transferred when the camera operates in normal photographic mode.~~

14 - 15 (Cancelled)

16. (Currently Amended) A mobile station according to ~~elaim~~
~~15~~claim 13, ~~characterised in that said~~wherein the
~~external~~internal serial connection bus comprises a serial bus
and a control serial bus and that the mobile station is
adapted to transfer control information to the camera module
via said control serial bus and to receive digital image
information from the camera module in serial form via said
serial bus.

 17 - 18 (Cancelled)

19. (Currently Amended) A mobile station according to claim 13,
further comprising means for transmitting digital image
information, transferred from the camera module to the mobile
station, ~~further~~ from the mobile station via a wireless link a
~~mobile communications network.~~

20. (Cancelled)

21. (Currently Amended) A method according to ~~elaim~~1claim 45,
~~characterised in that~~wherein the camera module is set into
viewfinder mode responsive to a control signal received from
the electronic device.

22. (Currently Amended) A method according to ~~elaim~~1claim 45,
~~characterised in that~~wherein the camera module is set into
normal photographic mode responsive to a control signal
received from the electronic device.

23. (Currently Amended) A method according to claim 1, ~~characterised in that~~wherein the transfer of digital image information from the camera module to the electronic device is started responsive to a control signal received from the electronic device.

24. (Currently Amended) A method according to claim 1, ~~characterised in that~~wherein a picture is taken by the camera module responsive to a control signal received from the electronic device.

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25. (Currently Amended) A method according to ~~claim 1~~claim 45, ~~characterised in that~~wherein reduction of the quantity of digital image information to be transferred from the camera module is conducted by leaving less significant bits of the digital image information untransferred.

26. (Currently Amended) A method according to ~~claim 1~~claim 45, ~~characterised in that~~wherein the camera module captures an image with maximum resolution and reduces the quantity of digital image information to be transferred at the stage when the digital image information is transferred to the electronic device.

27. (Currently Amended) A method according to claim 1, ~~characterised in that~~wherein the image is displayed on a display of the electronic device.

28. (Currently Amended) A method according to claim 1, ~~characterised in that~~wherein the camera module crops a region

from an image and transfers the digital image information of the cropped region to the electronic device.

29. (Currently Amended) A method according to claim 28, ~~characterised in that~~wherein the electronic device sends information about the region of the image to be cropped to the camera module.

30. (Currently Amended) A method according to claim 1, ~~characterised in that~~wherein the electronic device is a mobile station and the method further comprises transmitting digital image information, transferred from the camera module to the mobile station, ~~further~~ from the mobile station via a wireless link~~mobile communication network~~.

31. (Currently Amended) A camera module according to ~~claim~~claim 47, adapted to be set into viewfinder mode responsive to a control signal received from the electronic device.

32. (Currently Amended) A camera module according to claim 47~~claim 1~~, adapted to be set into normal photographic mode responsive to a control signal received from the electronic device.

33. (Previously Presented) A camera module according to claim 7, adapted to start the transfer of digital image information from the camera module to the electronic device responsive to a control signal received from the electronic device.

34. (Previously Presented) A camera module according to claim 7, adapted to take a picture responsive to a control signal received from the electronic device.

35. (Currently Amended) A camera module according to claim 47~~claim 7~~, ~~characterised in that said means for~~adapted to ~~reducing~~the quantity of digital image information to be transferred from the camera module ~~is arranged to~~by ~~leaveing~~leaving less significant bits of the digital image information untransferred.

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36. (Currently Amended) A camera module according to claim 47~~claim 7~~, adapted to capture an image with maximum resolution and to reduce the quantity of digital image information to be transferred at the stage when the digital image information is transferred to the electronic device.

37. (Previously Presented) A camera module according to claim 7, adapted to crop a region from an image and to transfer the digital image information of the cropped region to the electronic device.

38 - 43 (Cancelled)

44. (New) A method according to claim 1, wherein the digital image information is transferred from the camera module to the electronic device via the internal serial connection bus under control of the electronic device.

45. (New) A method according to claim 1, wherein the camera module is adapted to operate in either one of a normal photographic mode and a viewfinder mode, such that when operating in viewfinder mode the camera module reduces the quantity of digital image information to be transferred from the camera module to the electronic device compared with the quantity of digital image information that is transferred when the camera operates in normal photographic mode.

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46. (New) A camera module according to claim 7, adapted to transfer the digital image information from the camera module to the electronic device via the internal serial connection bus under control of the electronic device.

47. (New) A camera module according to claim 7, adapted to operate in either one of a normal photographic mode and a viewfinder mode and, when operating in viewfinder mode, to reduce the quantity of digital image information to be transferred from the camera module to the electronic device compared with the quantity of digital image information that is transferred when the camera operates in normal photographic mode.

48. (New) A mobile station according to claim 13, adapted to control the transfer of digital image information from the camera module to the mobile station via the internal serial connection bus.

49. (New) A mobile station according to claim 13, wherein the camera module is adapted to operate in either one of a normal

photographic mode and a viewfinder mode and, when operating in viewfinder mode, to reduce the quantity of digital image information to be transferred from the camera module to the mobile station compared with the quantity of digital image information that is transferred when the camera operates in normal photographic mode.

50. (New) A mobile station according to claim 49, wherein the camera module is adapted to reduce the quantity of digital image information to be transferred from the camera module by adjusting the conversion accuracy of the analogue-to-digital conversion performed by the analogue-to-digital converter.

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51. (New) A mobile station according to claim 49, wherein the camera module is adapted to reduce the quantity of digital image information to be transferred from the camera module by reducing the resolution of the image.

52. (New) A mobile station according to claim 51, wherein the camera module is adapted to reduce the resolution of the image by under-sampling the digital image information.

53. (New) A mobile station according to claim 49, wherein the camera module is adapted to be set into viewfinder mode responsive to a control signal received from the mobile station.

54. (New) A mobile station according to claim 49, wherein the camera module is adapted to be set into normal photographic

mode responsive to a control signal received from the mobile station.

55. (New) A mobile station according to claim 13, wherein the camera module adapted to start the transfer of digital image information responsive to a control signal received from the mobile station.

56. (New) A mobile station according to claim 13, wherein the camera module is adapted to take a picture responsive to a control signal received from the mobile station.

57. (New) A mobile station according to claim 49, wherein the camera module is adapted to reduce the quantity of digital image information to be transferred from the camera module by leaving less significant bits of the digital image information untransferred.

58. (New) A mobile station according to claim 49, wherein the camera module is adapted to capture an image with maximum resolution and to reduce the quantity of digital image information to be transferred at the stage when the digital image information is transferred to the mobile station.

59. (New) A mobile station according to claim 13, wherein the camera module is adapted to crop a region from an image and to transfer the digital image information of the cropped region to the mobile station.

60. (New) A mobile station according to claim 59, wherein the mobile terminal is adapted to send information about the region of the image to be cropped to the camera module.

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61. (New) A mobile station according claim 13, further comprising a display for displaying images produced by the camera module.
